

The WIPP Bulletin - Winter 1997

"Protecting Public Health and the Environment"

Office of Radiation and Indoor Air

Number 4

A Message From the Director

WIPP Center

By Frank Marcinowski

The past several months have been extremely busy for the WIPP project. Since the receipt of the Department of Energy's (DOE) WIPP Compliance Certification Application (CCA), the WIPP staff have been working hard reviewing data, verifying records, and analyzing assumptions. Staff have been spending a lot of time in New Mexico conducting audits of the quality assurance procedures DOE is using at WIPP, examining computer code development and record packages, and evaluating CCA issues. In addition, we recently held several informal meetings with some key stakeholders to obtain their input on the CCA.

While the Agency has not yet completed its review of the massive application, we have identified areas where DOE needs to provide EPA with further information. Those areas are detailed in a December 19, 1996 letter from EPA Assistant Administrator Mary Nichols to DOE Assistant Secretary Alvin Alm, a copy of which is available for review at each of EPA's WIPP public docket or at EPA's WIPP site on the Internet. DOE has already responded to several of the Agency's concerns; however, until all issues are addressed, the Administrator will not be able to issue a formal "completeness determination."

The next few months are critical to the development of EPA's proposed certification decision. We know that DOE is working hard to address all of the Agency's concerns, which reflect several public comments that were received by the Agency through written correspondence or orally during recent stakeholder meetings. We expect to receive additional public comments during the hearings that will be held in New Mexico this month. After we have considered all of the public comments, and we determine that DOE has responded to all of our concerns, we will draft the proposed certification decision.

THE WIPP CERTIFICATION RULEMAKING

By Mary Kruger

EPA regulates the release of radionuclides from the management, storage and disposal of radioactive waste in order to protect public health and the environment. The WIPP, which is under development by the Department of Energy (DOE), is a potential geologic disposal system for defense transuranic (TRU) radioactive waste. Pursuant to the 1992 WIPP Land Withdrawal Act (LWA), as amended, EPA is required to perform several activities including, but not limited to: (1) finalizing safety standards for radioactive waste disposal; (2) issuing criteria for determining whether the WIPP complies with the radioactive waste disposal standards; (3) certifying whether the WIPP complies with the standards before waste disposal can begin; and, if EPA certifies that the WIPP complies, (4) determining (or "re-certifying") whether the WIPP continues to be in compliance with the disposal standards every five years after initial receipt of waste for disposal at the site.

In December 1993, EPA completed the first of these activities by issuing the final radioactive waste disposal standards (40 CFR 191), which placed limits on the releases of radionuclides from waste management, storage and disposal facilities. Then, in January 1995, EPA issued proposed compliance criteria, to implement the 40 CFR 191 disposal standards specifically at the WIPP. In February 1996, the Agency promulgated the final compliance criteria at 40 CFR

EPA's next major activity, the compliance certification decision, will be based on DOE's application and supporting documentation and public comments in determining WIPP's compliance with the disposal regulations found in Subparts B and C of 40 CFR 191. DOE must demonstrate, with "reasonable expectation," that WIPP complies with the following provisions of the compliance criteria:

General Requirements, such as quality assurance, computer models and codes, waste characterization, future states assumptions, expert judgment, and peer review.

Containment Requirements, which address methodologies for considering inadvertent human intrusion and conducting probabilistic performance assessment.

Assurance Requirements, such as institutional controls, monitoring and engineered barriers, which are intended to provide additional confidence in the performance of the disposal system.

Individual and Ground-Water Protection Requirements, which apply to undisturbed performance (i.e., no human intrusion) and limit exposures over 10,000 years, with the specific requirement of no more than 15 millirem per year per individual.

Since the WIPP is a first-of-a-kind radioactive waste disposal facility, EPA's approach to the WIPP may set precedent for future approaches to other radioactive waste disposal facilities. Many of the nuclear waste issues that are of considerable concern to the public will be addressed in the certification rulemaking.

EPA received DOE's compliance certification application on October 29, 1996, and placed the application in each of the Agency's WIPP public dockets in Washington, DC and New Mexico. EPA began the certification rulemaking on November 15, 1996, with the publication of an Advance Notice of Proposed Rulemaking in the Federal Register, which marked the beginning of a 120-day public comment period. During the comment period (which concludes on March 17, 1997), EPA will hold public hearings in three cities in New Mexico. The Agency has already obtained preliminary input on DOE's application by meeting informally with five stakeholder groups.

Administrator Browner will inform the Secretary of Energy, in writing, when EPA determines that the application is complete. Then, after considering public comments, the Agency will issue a Notice of Proposed Rulemaking announcing its proposed decision on whether or not the WIPP complies with the disposal standards. Again, EPA will hold a 120-day public comment period and public hearings. The Agency's next milestone -- to promulgate a final rule certifying whether or not WIPP is safe enough to contain transuranic waste for 10,000 years -- is expected to be fulfilled approximately one year after the conclusion of a completeness determination. This task will be completed only after the Agency has considered public comments and the Administrator is satisfied that all relevant issues have been appropriately addressed.

Changes in RCRA as a Result of the LWA Amendments *By Reid Rosnick*

Significant changes to how the Resource Conservation and Recovery Act (RCRA) is applied to the WIPP took place in 1996 when the President signed the Defense Authorization Act of 1997 which amended the WIPP Land Withdrawal Act by exempting WIPP from the requirements of the RCRA land disposal restrictions. EPA's Office of Solid Waste (OSW) had been responsible for a no-migration determination for the WIPP; however, as a result of the amendment, OSW has terminated its review of DOE's no-migration petition, but will continue to provide technical assistance to the State of New Mexico, and EPA's Office of Radiation and Indoor Air.

The State of New Mexico (with assistance from EPA's Region 6 office in Dallas) continues to be responsible for producing a RCRA hazardous waste facility permit for the site. This permit would cover the storage and disposal of the hazardous portion of the transuranic waste expected to be emplaced at WIPP. A draft of this permit is expected to be

issued early 1997.

1996 WIPP Land Withdrawal Act Amendments

Amendments to the Land Withdrawal Act were signed into law by President Clinton on September 23, 1996. Some of these changes directly affected EPA's regulation of the WIPP. The amendments:

1. Removed all requirements pertaining to the test phase that DOE originally planned to conduct, then subsequently determined was unnecessary. EPA is no longer required to undertake any activity related to a test phase.
2. Required DOE to submit all chapters of the compliance application to EPA by October 31, 1996.
3. Clarified that the Administrator may, at any time, request additional information from the Secretary, as needed, to certify whether the WIPP facility will comply with the disposal regulations.
4. Removed the requirement that DOE remove all TRU waste from the WIPP and decommission the facility if EPA does not certify compliance within 10 years of the first receipt of waste. The Amendments also repealed a provision allowing a one-time, two-year extension of the 10-year deadline if EPA decides additional time is necessary to complete the certification rulemaking.
5. Exempted transuranic mixed waste designated for disposal at the WIPP from specific treatment standards and land disposal prohibitions of the Solid Waste Disposal Act (42 U.S.C. 6924(m)), including the "no-migration determination."
6. Removed language calling for the removal of waste from the disposal system during the disposal and decommissioning phases in the event that EPA finds DOE not to comply with an environmental law, regulation, or permit requirement, and DOE fails to prepare an adequate remedial plan.
7. Added that DOE shall use engineered and natural barriers and "any other measures (including waste form modifications) to the extent necessary at WIPP to comply with the final disposal regulations."
8. Declared the "sense of Congress" to be that DOE should begin disposing of transuranic radioactive waste at the WIPP not later than November 30, 1997, provided that the WIPP has complied with all applicable laws and health and safety standards.

Inspections **By Mike Eagle**

We all perform inspections. Before we buy an item, we examine or measure the item to determine if the item meets our needs. Otherwise, clothes wouldn't fit properly. Shoppers examine the color of tomatoes and measure the size of televisions. We also inspect activities; we examine or measure the actions of others. Supervisors and parents do it all the time.

EPA's WIPP Center is conducting inspections of the WIPP facility to support its evaluation of DOE's application. The first inspection was conducted December 10-14, 1996, to verify that the quality assurance program of the WIPP's Carlsbad Area Office conforms to the requirements of Quality Assurance Program Requirements for Nuclear Facilities, known as NQA-1. A similar inspection was conducted at Sandia National Laboratory in Albuquerque, NM, January 13-14, 1997. Future plans include inspections of the mine shafts to verify the repository's depth and other geologic factors and inspections of DOE audits.

NQA-1 also tells us how to conduct inspections, and 40 CFR 194.21 provides EPA the authority to conduct them. NQA-1 provides the following definitions:

- An *inspection* is an examination or measurement to verify whether an item or activity conforms to specified requirements.
- An *inspector* is a person who performs inspection activities to verify conformance to specific requirements.

NQA-1 also provides requirements for "inspection hold points", "inspection planning", and "records." I will now explain each of these terms to the enduring reader.

"Inspection hold points" may be established so that the work may not proceed without the consent of the inspectors. The purpose of this requirement is to perform inspections before it's too late; that is, before the item fails or before the item can no longer be inspected. For example, inspection hold points are placed on aircraft to ensure that aircraft do not continue flying without the required mechanical inspections.

Like other activities we perform, inspections require planning. NQA-1 states that the planning should be documented to identify inspection methods and acceptance criteria. Where a sample is used to verify acceptability of a group of items, the sampling procedure should be based on recognized standard practices.

The inspection is not finished until the paperwork is done. The inspection record should identify (1) item inspected, (2) date of inspection, (3) inspector, (4) type of inspection, (5) results or acceptability, and (6) actions taken when something was found wrong.

Well, that's inspections in a nutshell. For those unique readers who wish to know more about inspections, a copy of NQA-1 and its supplemental requirements may be obtained from the American Society of Mechanical Engineers.

Partnering with the National Safety Council

By Cheryl Malina

Through a cooperative agreement with EPA, the National Safety Council (NSC) is performing activities that are designed to further increase public awareness and understanding of the health risks associated with the WIPP and the various federal/state WIPP-related regulatory responsibilities. NSC is a nonprofit public service organization that is a recognized source of worker and public safety and health information with state and community based chapters and offices throughout the country.

The NSC contracted with the University of New Mexico's Institute for Public Policy (IPP) to conduct a series of three focus groups in New Mexico and a statewide public opinion survey. The IPP developed these instruments to probe the NM public's knowledge of the WIPP and the oversight and regulatory process surrounding it. The WIPP focus groups were held in September 1996 in three New Mexico cities: Albuquerque, Santa Fe and Roswell. The information learned from the focus groups was supplemented by the results of a statewide public opinion survey which was conducted in October.

The data indicates that there is a strong connection between public opinion toward the WIPP and related beliefs about science, EPA, and radiation. Nonetheless, respondents appeared to be willing to change their minds about the WIPP depending on whether the EPA and independent oversight groups chose to identify WIPP as safe to open.

Based on the questions that were posed by New Mexicans during the focus groups and survey, the NSC will begin developing informational materials for their outreach efforts. These materials will focus on providing the best information possible to the public on radiation safety and health issues specific to the WIPP and the regulatory responsibilities of the various federal and state agencies that are involved. These documents will be distributed through local health professionals and community organizations and published on the Internet at NSC's World Wide Web site in the Spring.

Go Surfing with EPA and the WIPP

You can now read all about EPA's WIPP Program on the Internet. EPA's WIPP Homepage is an excellent source for current information on EPA WIPP activities. On the homepage, you can read about EPA's role in the WIPP, the compliance criteria, the certification decision, public outreach activities and the calendar of events. From the Homepage you can also retrieve EPA documents and docket information. EPA's WIPP Homepage address is:
<http://www.epa.gov/radiation/wipp/>

EPA Develops Guidance for Management of Waste at WIPP

By Betsy Forinash

In the event that EPA approves the opening of the WIPP, EPA must ensure that disposal operations will protect public health and the environment. To this end, EPA is developing "WIPP Subpart A Guidance" to implement standards for disposal operations at the WIPP. EPA's generally applicable standards at 40 CFR 191, Subpart A, limit radiation doses to the public from activities associated with receiving and emplacing the waste in the WIPP. (Limitations on radiation doses which may occur after closure of the disposal system are separately addressed by EPA's disposal regulations at Subparts B and C of 40 CFR Part 191, and by WIPP compliance criteria at 40 CFR Part 194.)

The "WIPP Subpart A Guidance" describes the application of Subpart A to activities associated with the 25- to 30-year period during which packaged waste would arrive at the above-ground portion of the WIPP, be unloaded and prepared for emplacement in the underground repository, and ultimately lowered down a mechanical hoist and emplaced in the mined-out repository, if the WIPP is approved for use as a disposal system. During this period, the annual doses from radiation received by members of the public must not exceed the limits specified by EPA's Subpart A standards. Such doses could occur, for example, through airborne emissions of radioactive dust which is subsequently inhaled by members of the public.

The guidance clarifies EPA's interpretation of certain definitions as applied to the WIPP, and provides Agency recommendations for methods used to demonstrate and document compliance with the standards. However, it does not establish binding rights or duties on EPA or on DOE (although the basic safety standards are binding on DOE). The guidance addresses Subpart A compliance issues such as:

- The compliance boundary at the WIPP;
- Environmental monitoring techniques considered appropriate for demonstrating compliance; and
- Information expected to be provided to EPA to document compliance.

EPA published a notice in the Federal Register on September 5, 1996 announcing availability of draft "WIPP Subpart A Guidance" and inviting public comment on all aspects of the draft guidance. (See 61 FR 46804.) The draft guidance is being revised based on comments, and is expected to be available to the public in February 1997.

Public Hearings in New Mexico

EPA will conduct public hearings to receive comments on the Department of Energy's Compliance Certification Application for the Waste Isolation Pilot Plant. These hearings will be held on February 19, at the Pecos River Village Conference Center, Room #5, 711 Muscatel, Carlsbad, NM; on February 20, at the Albuquerque Convention Center, Cochiti/Taos Room, 401 Second Street, NW, Albuquerque, NM; and on February 21, at the Sweeney Convention Center, Room #1, 201 W. Marcy, Santa Fe, NM.

Recent EPA WIPP Notices and Publications

Implementation of the Waste Isolation Pilot Plant Land Withdrawal Act, FY 1995 Report to Congress Document Number: EPA 402-R-96-010

Federal Register Notice, 61 FR 46804, September 5, 1996, "Draft Guidance for the Implementation of EPA's Radiation

Protection Standards for Management and Storage of Radioactive Waste at the WIPP, Subpart A Guidance -- Notice of Availability"

Federal Register Notice, 61 FR 58499-58500, November 15, 1996, "Decision to Certify Whether the WIPP Complies with the 40 CFR Part 191 Disposal Regulations and the 40 CFR Part 194 Compliance Criteria - Advance Notice of Proposed Rulemaking (ANPR)"

Federal Register Notice, 62 FR 2988-2989, January 21, 1997, "Opportunity to Present Oral Testimony on the DOE's Compliance Certification Application for the WIPP - Notice of Public Hearings"